Kiwa Ltd.
Unit 5 Prime Park Way
Prime Enterprise Park
Derby
DE1 3QB
T: +44 (0)1332 383333
E: uk.bpenquiries@kiwa.com
W: www.kiwa.co.uk/bda

BAW-19-117-S-A-UK
BDA Agrément®
System F1.10
Support System for Façade Cladding Panels

Allface Befestigungstechnologie GmbH
Aredstrasse 29
2544 Leobersdorf
Austria
T: +43 2256 62518
E: office@allface.com
W: www.allface.com

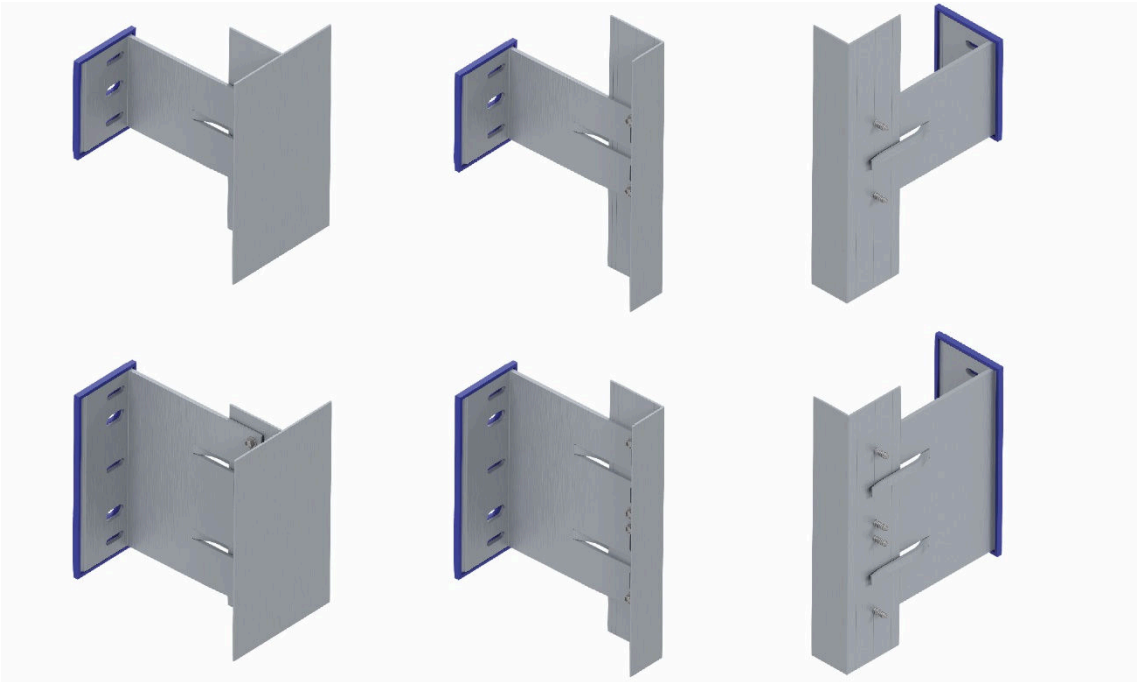
SCOPE OF AGRÉMENT

This Agrément relates to System F1.10 (hereinafter the 'System'), a subframe for ventilated and drained rainscreens. The System is suitable for installation on masonry, blockwork, concrete, timber frame or light gauge steel frame (hereinafter 'LGSF') supporting walls.

DESCRIPTION

The System comprises aluminium F1 or F1+ brackets and L or T-profile vertical rails, connected using stainless steel screws to form a sliding or fixed point, depending on structural (static) calculations. The brackets are available in various lengths, to create a cavity up to 365 mm wide, and feature a 60 mm deep 'clip' to clamp the rails. Cladding panels are face fixed to the vertical rails using rivets or screws. Various ancillary items for use with the System can be supplied on request.

ILLUSTRATION



THIRD-PARTY ACCEPTANCE

None requested by the Agrément holder.

STATEMENT

It is the opinion of Kiwa Ltd., that the System is safe and fit for its intended use, provided it is specified, installed and used in accordance with this Agrément.

Chris Vurley, CEng
Technical Manager, Building Products

Mark Crowther, M.A. (Oxon)
Kiwa Ltd. Technical Director

SUMMARY OF AGRÉMENT

This document provides independent information to specifiers, building control personnel, contractors, installers and other construction industry professionals considering the safety and fitness for the intended use of the System. This Agrément covers the following:

- Conditions of use;
- Production Control, Quality Management System and the Annual Verification Procedure;
- System components and ancillary items, points of attention for the Specifier and examples of details;
- Installation;
- Independently assessed System characteristics and other information;
- Compliance with national Building Regulations, other regulatory requirements and Third-Party Acceptance, as appropriate;
- Sources.

MAJOR POINTS OF ASSESSMENT

Strength - the System has adequate strength to resist wind loads normally encountered in the UK (see section 2.2.10).

Fire performance - the System components are classified as European Classification A1, in accordance with BS EN 13501-1 (see section 2.2.11).

Durability - the System shall have a service life durability equivalent to that of the building into which it is incorporated (see section 2.2.12).

UKCA and CE marking - the Agrément holder has responsibility for conformity marking in accordance with all relevant British and European Product Standards (see section 2.2.13).

CONTENTS

CHAPTER 1 - GENERAL CONSIDERATIONS

1.1 - CONDITIONS OF USE

1.1.1 Design considerations
See section 2.2.

1.1.2 Application
The assessment of the System relates to its use in accordance with this Agrément and the Agrément holder's requirements.

1.1.3 Assessment
Kiwa Ltd. has assessed the System in combination with relevant test reports, technical literature, the Agrément holder's quality plan, DoPs and site visit as appropriate.

1.1.4 Installation supervision
The quality of installation and workmanship must be controlled by a competent person who must be an employee of the installation company.

The System shall be installed strictly in accordance with the instructions of the Agrément holder and the requirements of this Agrément.

1.1.5 Geographical scope
The validity of this document is limited to England, Wales, Scotland and Northern Ireland, with due regard to Chapter 3 of this Agrément (CDM, national Building Regulations and Third-Party Acceptance).

1.1.6 Validity
The purpose of this BDA Agrément® is to provide for well-founded confidence to apply the System within the Scope described. The validity of this Agrément is three years after the issue date, and as published on www.kiwa.co.uk/bda.

1.2 - PRODUCTION CONTROL AND QUALITY MANAGEMENT SYSTEM

Kiwa Ltd. has determined that the Agrément holder fulfils all obligations in relation to this Agrément, in respect of the System.

The initial audit demonstrated that the Agrément holder has a satisfactory Quality Management System (QMS) and is committed to continuously improving their quality plan. Document control and record-keeping procedures were deemed satisfactory. A detailed Production Quality Specification (PQS) has been compiled to ensure traceability and compliance under the terms of this Agrément.

1.3 - ANNUAL VERIFICATION PROCEDURE - CONTINUOUS SURVEILLANCE

To demonstrate that the System conforms with the requirements of the technical specification described in this Agrément, an Annual Verification Procedure has been agreed with the Agrément holder in respect of continuous surveillance and assessment, and auditing of the Agrément holder's QMS.

CHAPTER 2 - TECHNICAL ASSESSMENT

This Agrément does not constitute a design guide for the System. It is intended as an assessment of safety and fitness for purpose only.

2.1 - SYSTEM COMPONENTS AND ANCILLARY ITEMS

2.1.1 Components included within the scope of this Agrément

The following components are integral to the use of the System:

Table 1 - System components

Item	Type	Description	Article number	Length (mm)	Width (mm)	Height (mm)	Thickness (mm)
bracket	F1	untreated EN AW-6060 T66 aluminium alloy bracket, in accordance with BS EN 573-3, with three slots (default for the UK): 1 x 11 mm and 2 x 6.5 mm. The tip of the bracket has 5.1 mm diameter holes and 18 mm slots to create fixed or sliding point-connections with rails	F1.035X3	35	65	90	4
			F1.050X3	50			
			F1.080X3	80			
			F1.100X3	100			
			F1.115X3	115			
			F1.135X3	135			
			F1.150X3	150			
			F1.185X3	185			
			F1.200X3	200			
			F1.220X3	220			
			F1.235X3	235			
			F1.255X3	255			
			F1.285X3	285			
			F1.320X3	320			
	F1+	untreated EN AW-6060 T66 aluminium alloy bracket, in accordance with BS EN 573-3, with five slots (default for the UK): 3 x 6.5 mm and 2 x 11 mm. The tip of the bracket has 5.1 mm diameter holes and 18 mm slots to create fixed or sliding point-connections with rails	F1+035X5	35	65	175	4
			F1+050X5	50			
			F1+080X5	80			
			F1+100X5	100			
			F1+115X5	115			
			F1+135X5	135			
			F1+150X5	150			
			F1+185X5	185			
			F1+200X5	200			
			F1+220X5	220			
			F1+235X5	235			
			F1+255X5	255			
			F1+285X5	285			
			F1+320X5	320			
rail	L-profile	untreated EN AW-6063 T66 aluminium alloy rail, in accordance with BS EN 573-3, for intermediate support of cladding panels	A-L04004020	6000	40	40	2
			A-L04006020		40	60	2
			A-L06006020		60	60	
	T-profile	untreated EN AW-6063 T66 aluminium alloy rail, in accordance with BS EN 573-3, for edge support of cladding panels along a vertical edge	A-T07006020	6000	70	60	2
			A-T10006020		100	60	2
			A-T12006020		120	60	2
fixing	Würth/ZEBRA Pias	A2 stainless steel self-drilling screw, 4.8 mm diameter to connect rail and bracket	S-SKT4480190.A2.W	19	-	-	-

2.1.2 Ancillary items falling outside the scope of this Agrément

Ancillary items detailed in this section can be used in conjunction with the System but fall outside the scope of this Agrément:

Table 2 - Ancillary items

Item	Type	Description	Article number	Width (mm)	Height (mm)	Thickness (mm)
insulator	F1	polythene pad to mitigate thermal bridges, suitable for use with F1 brackets; indicative thermal conductivity of 0.40 - 0.49 W/mK	I.F1.CNM (single insulator)	71.2	97	5
			I.F1.CAM (pre-assembled with bracket)	71.2	97	5
	F1+	polythene pad to mitigate thermal bridges, suitable for use with F1+ brackets; indicative thermal conductivity of 0.40 - 0.49 W/mK	I+F1.CNM (single insulator)	71.2	182	5
			I+F1.CAM (pre-assembled with bracket)	71.2	182	5
strip	L	for strengthening the exterior/outward/outer corner of cladding panels	A-L04006020	-	-	-
fixing	Ejot JT3-2-4.9x70-E16	self-drilling anchor to connect bracket & timber stud	S-SKT0490700.A2	-	-	-
	Fischer SXR 10x60 FUS,	anchor to connect bracket & concrete substrate	D-SXR10x60FUS	-	-	-
	Fischer SXR 10x80 FUS		D-SXR40x80FUS	-	-	-

2.2 - POINTS OF ATTENTION TO THE SPECIFIER

2.2.1 Design responsibility
A Specifier may undertake a project-specific design, in which case it is recommended that the Specifier co-operates closely with the Agrément holder. The Specifier or installing contractor is responsible for the final as-built design.

2.2.2 Applied building physics (heat, air, moisture)
A competent specialist shall check the hygrothermal behaviour of a project specific design incorporating the System and, if necessary, can offer advice in respect of improvements to achieve the final specification. The Specialist can be either a qualified employee of the Agrément holder or a suitably qualified consultant (in which case it is recommended that the consultant Specialist co-operates closely with the Agrément holder).

2.2.3 General design considerations
The supporting wall shall have adequate strength and stiffness. This shall be verified by a qualified structural engineer.

The Structural Engineer shall confirm the System can resist wind loads and System self-weight. The Structural Engineer shall take into account expansion joints, differential movement (e.g. for timber frame supporting walls) and linear thermal expansion of the System. Wind actions shall be calculated in accordance with BS EN 1991-1-4.

The Agrément holder can provide several services to aid with the design:
- structural analysis and calculations of quantities and costs;
- installation drawings;
- CAD drawings of system details.

The strength of connections to the supporting wall as reported in this Agrément only applies to the connections as tested. In practice, the strength of these connections can vary between each project-specific design and may vary from the reported values. Assessment of the structural performance of the System shall be carried out by a qualified structural engineer to confirm that the System can resist the design wind loads, can safely transfer loads to the building and can accommodate all anticipated thermal movements without damage.

Fixings for brackets that differ from those detailed in this Agrément may only be specified if test reports from an accredited laboratory confirm the pull and shear strength of the fixings is adequate for the design wind loads and self-weight of the System.

The System shall be designed in accordance with the guidance of the Agrément holder.

2.2.4 Project-specific design considerations
The project-specific design shall:
- take into account the required service life and the exposure conditions - see section 2.2.12;
- take into account the requirements of the national Building Regulations - see section 3.2;
- be based on structural calculations considering specific conditions and situations.

The Agrément holder shall be provided with an 'execution specification' in accordance with BS EN 1090-3, including the execution class (EXC) (if no execution class is specified, EXC2 applies). Refer to Clause 4 and Annex A of BS EN 1090-3 for guidance on execution specification requirements.

The length/depth of brackets shall be selected based upon:
- thermal insulation thickness;
- required air gap (minimum 25 mm for cladding panels with sealed joints or 50 mm for cladding panels with open joints);
- insulator thickness;
- insertion depth of rails within bracket clamp.

The thermal conductivity of brackets is 160 W/mK. Thermal bridging can be limited by surrounding brackets with thermal insulation and/or by using insulators.

The effect of the System on the U-value of an external wall is negligible.

No pre-installation survey is required.

2.2.5 Permitted applications
Only applications designed according to the specifications given in this Agrément are permitted. In each case, the Specifier and Installer shall co-operate closely with the Agrément holder.

2.2.6 Installer competence level
The System shall be installed strictly in accordance with the instructions of the Agrément holder and the requirements of this Agrément.

Installation can be undertaken by competent persons experienced in this sort of work.

2.2.7 Delivery, storage and site handling
The System is delivered to site in suitable packaging, bearing the System name, the Agrément holder's name and the BDA Agrément® logo incorporating the number of this Agrément.
Prior to installation, store the System components in accordance with the Agrément holder's requirements. When required, particular care shall be taken to:
- avoid exposure to direct sunlight for extended periods of time;
- avoid exposure to high or low temperatures for extended periods of time;
- store in a well-ventilated covered area to protect from rain, frost and humidity;
- store away from possible ignition sources.

2.2.8 Maintenance and repair
Once installed, the System does not require maintenance. Consult the Agrément holder for advice in respect of repairs.

Performance factors in relation to the Major Points of Assessment

2.2.10 Strength
Wind loads shall be calculated in accordance with BS EN 1991-1-4. Due consideration shall be given to the higher-pressure coefficients applicable to the corners of a building.

Report all site-specific conditions that can affect the wind load calculations:
- location;
- building height;
- situation.

The situation relates to:
- the building plan;
- slenderness;
- orography;
- displacement height (h_{dis});
- funnelling.

Table 3 reports design values for the strength of various bracket and fixing combinations. The design values reported are indicative of performance and only valid for the connections as tested. Testing has been conducted in accordance with EAD 090062-04-0404, Annex L and evaluated in accordance with Annex N. System and fixing combinations other than those shown in Table 3 require testing.

Table 3 - Test programme and illustrative design strength of brackets

Substrate	Bracket	Fixing	Horizontal loads		Vertical loads	
			Number of tests	Design strength R_d (N)	Number of tests	Design strength R_d (N)
LGSF (1.2 mm, S450)	F1.320X3	Ejot JT3-3-6.3x50 (self-drilling screw)	10	2090	10	505
	F1+320X5		-	2090^	-	1010^
timber (C24)	F1.320X3	Ejot JT3-2-4.9x70 (self-drilling screw)	5	2295	5	270
concrete (C20/25)	F1.320X3	Fischer SXR-10/60 FUS	5	2760	5	590
	F1+320X5		5	3705	5	2395
	F1.150X3		-	2760^	5	1030

^ values determined by comparison with similar connections, not measurements

For the mean, characteristic and design strength values of the System see section 2.5.1.

The principal building engineer or principal contractor is responsible for selecting adequate fixings (anchors) and cladding fasteners (screws or rivets).

Testing a sample of the project-specific design in-situ by an accredited laboratory prior to System installation is strongly recommended by the Agrément holder.

The strength of T66 aluminium extruded profiles (EN AW-6060 (brackets) and EN AW-6063 (rails)) can be found in Table 3.2b of BS EN 1999-1-1.

2.2.11 Fire performance
The System is classified as European Classification A1 in accordance with Commission Decision 96/603/EC.

Brackets do not:
- contribute to the external fire spread;
- adversely affect the internal fire spread (structure).

Insulators cannot be classified as ‘non-combustible’, however will have a negligible effect on external fire spread due to their quantity, size and to the extent they are protected by brackets.

2.2.12 Durability
The System shall have a service life durability equivalent to that of the building into which it is incorporated. The expected lifespan of the building itself should be at least 30-years.

Corrosion protection is dependent on the environment, the nature of the contact surfaces/connections and the fasteners.

The aluminium System components are untreated (no coating, no anodizing and no passivation); under normal atmospheric conditions no protective treatment is needed.

Identify the ‘environmental characteristics’ of the region as a whole (e.g. rural, industrial or marine). Consider the ‘environmental characteristics’ of the location (within the region) too if a significantly different 'microclimate' exists. These shall be recorded in the execution specification.
The nature and extent of all protection measures for contact surfaces and fasteners shall be specified in the execution specification.

Recommendations and guidance for corrosion protection can be found in BS EN 1999-1-1 and BS EN 1090-3.

For atmospheric exposure conditions relating to severe industrial/urban environments or to moderate or severe marine environments general points of attention are as follows:

- use insulators to avoid contact with concrete or masonry in an industrial or marine environment;
- avoid contact with soil;
- do not immerse aluminium components in water;
- when specifying a rainscreen cladding system to be used in conjunction with the System, consider:
  - some wood preservatives and timber species can damage to aluminium;
  - fungicides and mould repellents may contain metal compounds which, under wet or damp conditions, could cause aluminium to corrode;
  - cleaning materials with a pH below 5 or above 8 could cause aluminium to corrode;
  - verify if insulation products (e.g. mineral wool or polyurethane) contain corrosive agents which may be detrimental to aluminium under moist conditions.

2.2.13 UKCA and CE marking

The British standard for the System is BS EN 1090-1.

2.3 - EXAMPLES OF TYPICAL DETAILS

Diagram 1 - Bracket F1

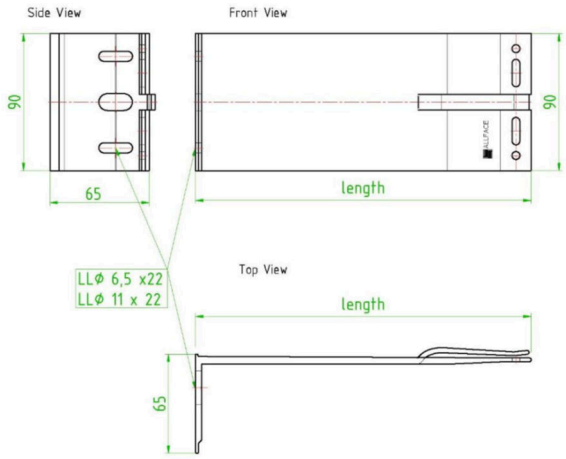


Diagram 2 - Bracket F1+

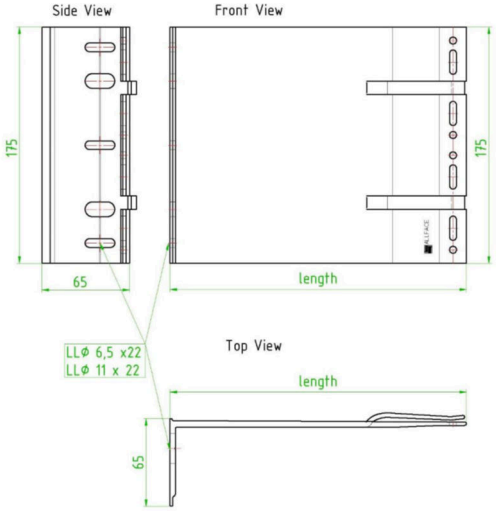


Diagram 3 - Insulators for F1 bracket (left) and F1+ bracket (right)

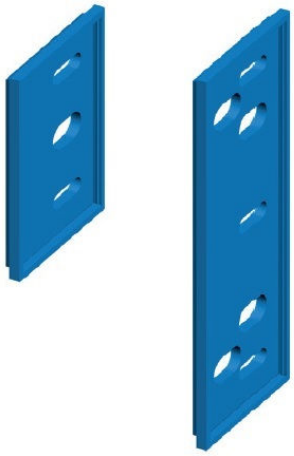


Diagram 4 - Vertical rails (L/T-profiles) - maximum dimensions

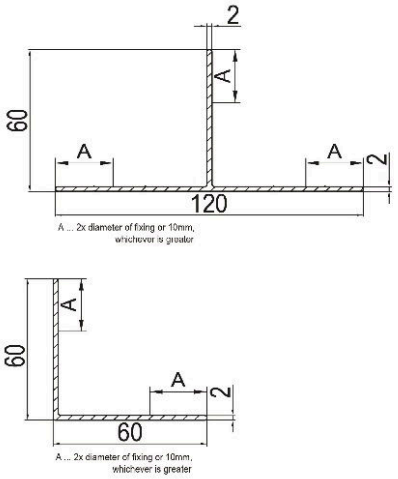


Diagram 5 - Insertion of rails in brackets

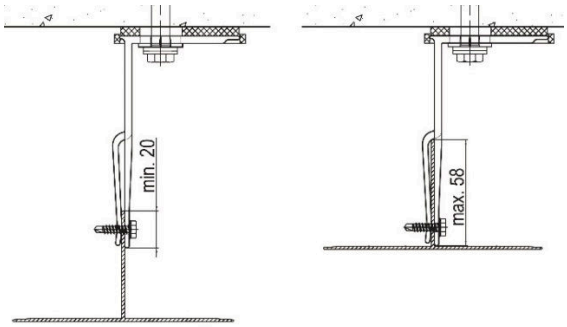
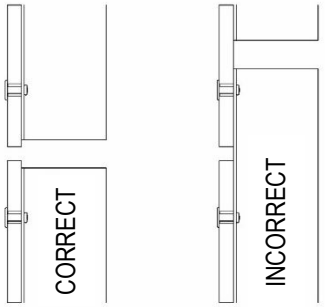


Diagram 6 - Horizontal joint cladding panels/rails



2.4 - INSTALLATION

The System shall be installed strictly in accordance with the instructions (hereinafter 'Installation Manual') of the Agrément holder and the requirements of this Agrément.

2.4.1 Installer competence level
See section 2.2.6.

2.4.2 Delivery, storage and site handling
See section 2.2.7.

2.4.3 Project-specific installation considerations
The project-specific design is not determined by a pre-installation survey.

The Agrément holder calculates and designs the System based on drawings provided by the specifier or contractor.

The installing contractor shall verify the building dimensions correspond to the project-specific design as provided to the Agrément holder.

2.4.4 Preparation
The following considerations apply before starting the work:
- access to the construction site, parking and unloading of vehicles;
- storage of System components, tools and on-site transport from storage to supporting wall;
- installation of the System (e.g. via scaffolding or using (aerial) lifting equipment).

The following works shall be undertaken before the installation of the System:
- the supporting wall shall be structurally sound and airtight.

2.4.5 Outline installation procedure
The installation sequence can be found in full in the Agrément holder's Installation Manual.

The key sequence for installation is:
- install the brackets in conjunction with insulators, or use pieces of sheathing board as packers, to ensure correct alignment on uneven surfaces;
- when installing the System on a supporting wall of timber frame or LGSF construction, ensure the fixings pass into either the timber frame or LGSF sections;
- do not mount brackets directly to sheathing boards less than 18 mm thick;
- brackets can be mounted directly to sheathing boards a minimum of 18 mm thick when the pull-out strength of the specified fixings has been tested;
- check the brackets for level and alignment;
- clamp a rail first and only screw-fix a rail to a bracket after the rails are plumb;
- use all available 6.5 mm slots (either two or three) for timber frame and LGSF supporting walls; use all 11 mm slots (two for F1+ brackets) for concrete/masonry;
- check rails are inserted a minimum of 20 mm in the 'clip' feature of brackets;
- ensure the gap between rails is a minimum of 10 mm;
- refer to the project-specific design for the location of fixed points and sliding points and obey the maximum distance for cantilever of a rail.

Install thermal insulation boards preferably after installation of the System.

Compartment the cavity using horizontal cavity closers at each floor level and vertical cavity closers at specified positions.

2.4.6 Finishing
No finishing is required on completion of the installation.

2.5 - INDEPENDENTLY ASSESSED SYSTEM CHARACTERISTICS

2.5.1 Strength

Test	Standard	Configuration or Component	Result^	
vertical load (shear)	EAD 090062-04-0404 Annex L	F1.320X3 on LGSF (1.2 mm thick, S450) supporting wall	F_k	925 N
			F_d	505 N
		F1+320X5 on LGSF (1.2 mm thick, S450) supporting wall	F_d	1010 N^^
		F1.320X3 on timber frame (C24) supporting wall	F_m	560 N
			F_k	440 N
			F_d	270 N
		F1.150X3 on concrete (C20/25) supporting wall	F_m	2960 N
			F_k	1955 N
			F_d	1030 N
		F1.320X3 on concrete (C20/25) supporting wall	F_m	1420 N
			F_k	1125 N
			F_d	590 N
		F1+320X5 on concrete (C20/25) supporting wall	F_m	4825 N
			F_k	4545 N
			F_d	2395 N
horizontal load (tension)	EAD 090062-04-0404 Annex L	F1.320X3 on LGSF supporting wall	F_k	3795 N
			F_d	2090 N
		F1+320X5 on LGSF supporting wall	F_d	2090 N^^
		F1.320X3 on timber frame (C24) supporting wall	F_m	4790 N
			F_k	3710 N
			F_d	2295 N
		F1.150X3 on concrete (C20/25) supporting wall	F_d	2760 N^^
		F1.320X3 on concrete (C20/25) supporting wall	F_m	5760 N
			F_k	5255 N
			F_d	2760 N
		F1+320X5 on concrete (C20/25) supporting wall	F_m	8435 N
			F_k	7040 N
			F_d	3705 N
shear (wind + mass)	-	all brackets	F_k	4460 N
			F_d	3350 N
horizontal load (pull-out)	-	cladding panel to rail	F_m	2330 N
			F_k	2040 N
			F_d	1535 N
shear strength	-	cladding panel to rail	F_k	1465 N
			F_d	580 N

^ the notations F_m, F_k and F_d refer to mean, characteristic and design values respectively
^^ values determined by calculation

2.5.2 Fire performance

Test	Standard	Component	Result
Reaction to fire	BS EN 13501-1	Brackets	A1^
		Rails	

^ in accordance with Commission Decision 96/603/EC

CHAPTER 3 - CDM, NATIONAL BUILDING REGULATIONS AND THIRD-PARTY ACCEPTANCE

3.1 - THE CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015 AND THE CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS (NORTHERN IRELAND) 2016

Information in this Agrément may assist the client, Principal Designer/CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

3.2 - THE NATIONAL BUILDING REGULATIONS

In the opinion of Kiwa Ltd., the System, if installed and used in accordance with Chapter 2 of this Agrément, can satisfy or contribute to satisfying the relevant requirements of the following national Building Regulations.

This Agrément shall not be construed to confer compliance of any project-specific design with the national Building Regulations.

3.2.1 England

The Building Regulations 2010 And Subsequent Amendments

- A1(1)(2) Loading - the System can sustain and transmit dead, imposed and wind loads normally encountered in the UK to a supporting wall
- B4(1) External fire spread - the System components do not contribute to the spread of fire over walls and from one building to another
- Regulation 7(1) Materials and workmanship - the System is manufactured from suitably safe, durable materials for the application and can be installed to give a satisfactory performance

3.2.2 Wales

The Building Regulations 2010 And Subsequent Amendments

- A1(1)(2) Loading - the System can sustain and transmit dead, imposed and wind loads normally encountered in the UK to a supporting wall
- B4(1) External fire spread - the System components do not contribute to the spread of fire over walls and from one building to another
- Regulation 7(1) Materials and workmanship - the System is manufactured from suitably safe, durable materials for the application and can be installed to give a satisfactory performance

3.2.3 Scotland

The Building (Scotland) Regulations 2004 And Subsequent Amendments

3.2.3.1 Regulation 8(1)(2) Durability, workmanship and fitness of materials

- The System is manufactured from acceptable materials and is adequately resistant to deterioration and wear under normal service conditions, provided it is installed in accordance with the requirements of this Agrément

3.2.3.2 Regulation 9 Building Standards - Construction

- 1.1(a) Structure - the System can sustain and transmit dead, imposed and wind loads normally encountered in the UK to a supporting wall
- 2.7 Spread on external walls - the System components do not contribute to the spread of fire on walls and from one building to another
- 7.1(a)(b) Statement of sustainability - the System can contribute to satisfying the relevant Requirements of Regulation 9, Standards 1 to 6, and will therefore contribute to a construction meeting a bronze level of sustainability as defined in this Standard. In addition, the Product can contribute to a construction meeting a higher level of sustainability, as defined in this Standard

3.2.3.3 Regulation 12 Building Standards - Conversions

- All comments given under Regulation 9 also apply to this Regulation, with reference to Schedule 6 of the Building (Scotland) Regulations 2004 and subsequent amendments and clause 0.12 of the Technical Handbook (Domestic) and clause 0.12 of the Technical Handbook (Non-Domestic)

3.2.4 Northern Ireland

The Building Regulations (Northern Ireland) 2012 And Subsequent Amendments

- 23(a)(i)(iii)(b) Fitness of materials and workmanship - the System is manufactured from materials which are suitably safe and acceptable for use as described in this Agrément
- 30(a)(b) Structure, stability - the System can sustain and transmit dead, imposed and wind loads normally encountered in the UK to a supporting wall
- 36(a) External fire spread - the System components do not contribute to the spread of flame over an external surface and the spread of fire from one building to another

3.3 - THIRD-PARTY ACCEPTANCE

None requested by the Agrément holder.

CHAPTER 4 - SOURCES

- BS EN ISO 10456:2007 Building materials and products. Hygrothermal properties. Tabulated design values and procedures for determining declared and design thermal values
- BS EN 573-3:2019 Aluminium and aluminium alloys. Chemical composition and form of wrought products. Chemical composition and form of products
- BS EN 1991-1-4:2005+A1:2010 Eurocode 1. Actions on structures. General actions
- NA to BS EN 1991-1-4:2005+A1:2010 UK National Annex to Eurocode 1. Actions on structures. General actions
- BS EN 1999-1-1:2007+A2:2013 Eurocode 9: Design of aluminium structures. General structural rules
- NA to BS EN 1999-1-1:2007+A1:2009 UK National Annex to Eurocode 9. Design of aluminium structures. General structural rules
- BS EN 13501-1:2018 Fire classification of construction products and building elements. Classification using data from reaction to fire tests
- BS EN 1090-1:2009+A1:2011 Execution of steel structures and aluminium structures. Requirements for conformity assessment of structural components
- BS EN 1090-3:2019 Execution of steel structures and aluminium structures. Technical requirements for aluminium structures
- Commission Decision 96/603/EC:1996 Establishing the list of products belonging to Classes A 'No contribution to fire' provided for in Decision 94/611/EC implementing Article 20 of Council Direction 89/106/EEC on construction products
- EAD 090062-00-0404:2018 Kits for external wall claddings mechanically fixed

Remark - Apart from these sources, technical information and confidential reports have been assessed; any relevant documents are in the possession of Kiwa Ltd. and kept in the Technical Assessment File of this Agrément. The Installation Manual for the System may be subject to change, and the Agrément holder should be contacted for clarification of revisions.

CHAPTER 5 - AMENDMENT HISTORY

Revision	Amendment description	Author	Approver	Date
-	First Issue	C Devine	C Vurley	April 2021

CHAPTER 6 - CONDITIONS OF USE

This Agrément may only be reproduced and distributed in its entirety.

Where a National Annex exists in respect of a BS EN (or other) standard, its use is deemed mandatory wherever the original standard is referenced.

Kiwa Ltd. has used due skill, care and attention in the preparation of this BDA Agrément®.

Whilst all due diligence has been used, no liability or warranty is extended by Kiwa Ltd.

For full terms and conditions refer to Kiwa Ltd.